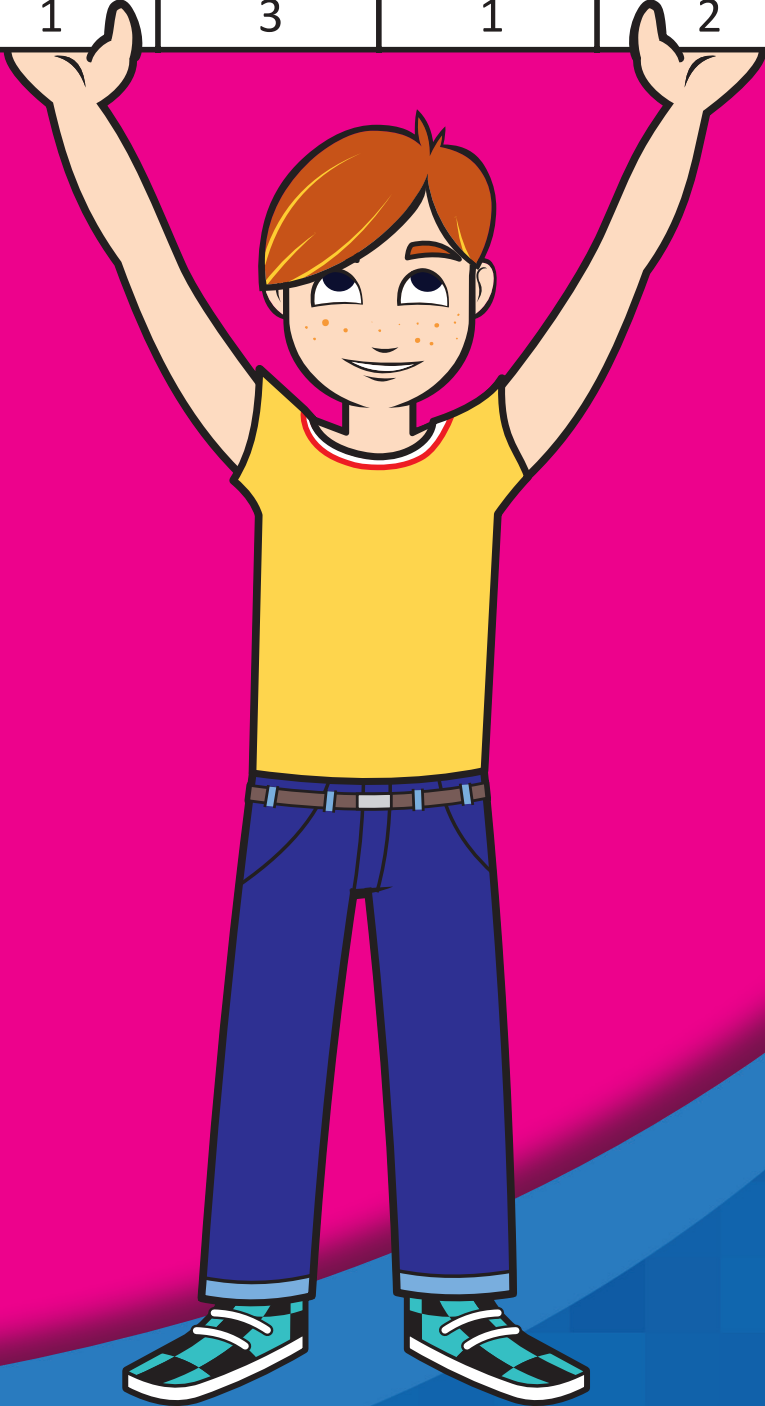


# Reading and Understanding Whole Numbers

Thousands	Hundreds	Tens	Units
1	3	1	2



# Series E – Reading and Understanding Whole Numbers

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Series Author:

Nicola Herringer

# Looking at whole numbers – reading and writing numbers to 9 999

When we read numbers we go left to right:

Thousands	Hundreds	Tens	Units
1	3	1	2

In words, this number is one thousand, three hundred and twelve. We write it like this 1 312. We leave a space between the thousands and hundreds.

- 1 Draw a line to match the number in words to the digits that match. The first one has been done for you.**

a	Eight thousand, two hundred and twelve		7 420
b	One thousand and sixteen		1 016
c	Five thousand, one hundred and two		5 102
d	Four thousand, five hundred and eighty nine		4 589
e	Seven thousand, four hundred and twenty		8 212

- 2 Underline the numbers in the sentences below and then answer the questions.**

- a In a game of darts, Matt scored four hundred and thirty five points and Ellie scored five hundred and sixty two points. Who scored more, Matt or Ellie?

*Ellie*

- b Emily saved five thousand, six hundred and fifty nine dollars while Libby saved five thousand, nine hundred and eighty five dollars. Who saved more?

*Libby*

- c Kim lives one thousand, eight hundred and forty two km from Magic Land theme park. Mish lives one thousand, seven hundred and sixty two km from the same theme park. Who lives closer?

*Mish*

The last question is different to the first two. Can you see why?



**THINK**

# Looking at whole numbers – reading and writing numbers to 9 999

**3** This is an exercise for one player that helps you to practise writing numbers.

Write the 4 digit number in words. Next, count the letters in the number – seven thousand, four hundred and sixty five has 36 letters. Write 36 in the number column and so on until you get to four. This is a sample game:

Now it is your turn:

Numeral	Numeral in words
7 465	seven thousand, four hundred and sixty five
36	thirty six
9	nine
4	four

Use the words in the box to help with spelling.



CHECK

one, two, three, four, five, six, seven, eight, nine, ten, eleven, twelve, thirteen, fourteen, ninety, forty, thousand, hundred, sixty, seventy, eighty.

Numeral	Numeral in words
3 987	<i>three thousand, nine hundred and eighty seven</i>
38	<i>thirty eight</i>
11	<i>eleven</i>
6	<i>six</i>
3	<i>three</i>
5	<i>five</i>
4	<i>four</i>

**4** What number am I? Write the numbers described below in words:

a I am the number before 945:

*nine hundred and forty four*

b I am 1 less than 530:

*five hundred and twenty nine*

c I am 7 less than 700:

*six hundred and ninety three*

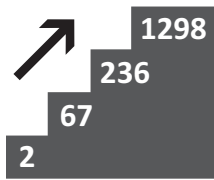
d I am 100 more than 6 878:

*six thousand, nine hundred and seventy eight*

# Looking at whole numbers – ordering numbers to 9 999

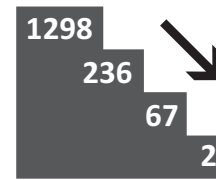
**Ascending** means going up. When we put numbers in ascending order it means we put them in order smallest to largest.

For example:



**Descending** means going down. When we put numbers in descending order it means we put them in order largest to smallest.

For example:



**1 Write the numbers which come before and after the given number:**

a 1 092 1 093 1 094

b 6 528 6 529 6 530

**2 Circle the smallest number and underline the largest number in each group:**

a 837 542 (261)

b 999 (909) 929

c (1 024) 3 852 7 203

d 5 469 5 117 (5 078)

**3 Re-write the following sets of numbers in ascending order:**

a 3 203 2 033 2 303 2 033 2 303 3 203

b 6 660 6 066 6 606 6 066 6 606 6 660

**4 Re-write the following sets of numbers in descending order:**

a 4 156 4 651 4 561 4 651 4 561 4 156

b 7 891 7 981 7 356 7 981 7 891 7 356

**5 Below is a number grid with some numbers missing. Look closely at the grid and fill in the missing spaces with the correct numbers.**

a

515	516						
525	526	527	528				
		537	538	539	540		
				549	550		

b

863	864	865
873	874	875
883	884	885

c

986	987	988
996	997	998
1 006	1 007	1 008

# Looking at whole numbers – ordering numbers to 9 999

6 Here is a number square that goes up to 1 000.

- a Look carefully at how the numbers go up. It is a skip counting pattern of 10s.
- b Fill in the blanks:

10	20	30	40	50	60	70	80	90	100
110	120	130	140	150	160	170	180	190	200
210	220	230	240	250	260	270	280	290	300
310	230	330	340	350	360	370	380	390	400
410	420	430	440	450	460	470	480	490	500
510	520	530	540	550	560	570	580	590	600
610	620	630	640	650	660	670	680	690	700
710	720	730	740	750	760	770	780	790	800
810	820	830	840	850	860	870	880	890	900
910	920	930	940	950	960	970	980	990	1 000

7 Look at each set of numbers and list some numbers that come between. Write them in order.

a

590

660

b

4 995

5 460

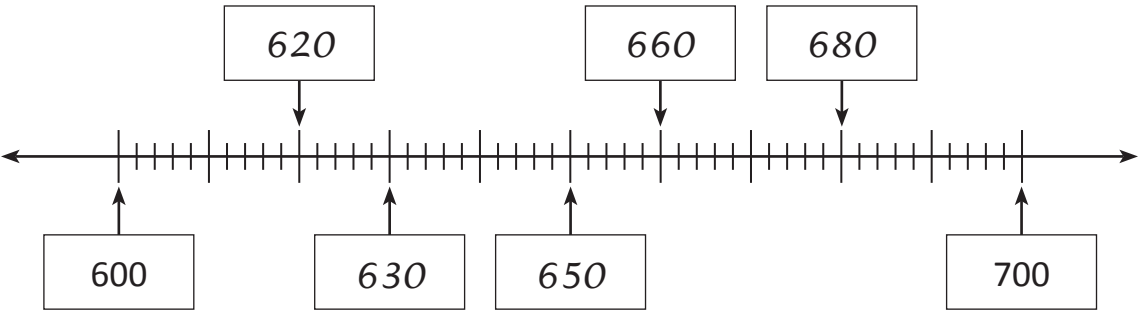
c

77 900

77 990

Answers will vary.

8 Look carefully at this number line and write the missing numbers.



# Looking at whole numbers – create and compare numbers

When we compare numbers we use these symbols:

>

This symbol means is greater (more) than

<

This symbol means is less than

An easy way to remember this is to think of Crandall the crocodile who is always hungry and will always eat the BIGGER number! We always read the number sentence from left to right.



5 is less than 54  
5 is < 54



124 is greater than 92  
124 is > 92

## 1 Use the correct >, < or = symbol:

a 203 > 172

b 3 033 = 3 033

c 572 < 615

d 5 690 > 5 688

e 909 > 901

f 9 009 < 9 090

## 2 Put a number in the box so the statement is true:

a  > 6 890

b  > 603

c  > 1 204

d  > 8 051

*Answers will vary.*

## 3 Put a number in the box so the statement is true:

a 45 <

b 564 <

c 7 895 <

d 9 984 <

*Answers will vary.*

## 4 Use the correct > or < symbol to make the number sentences true:

a 15 > 14 < 16

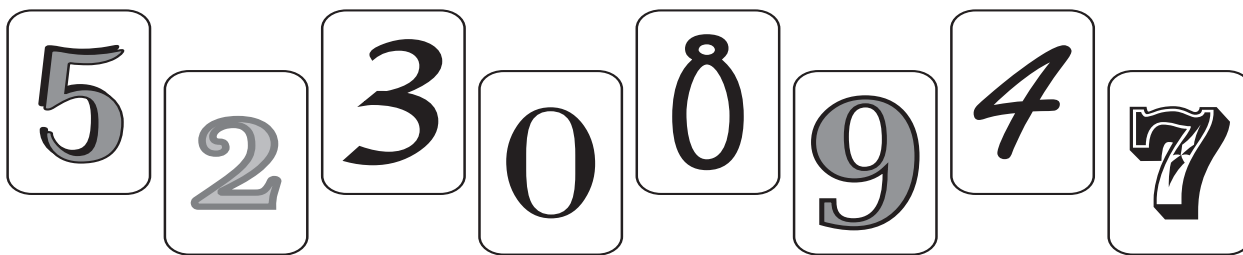
b 98 < 1 005 < 2 010

c 17 < 18 < 21

d 7 586 > 528 > 29

# Looking at whole numbers – create and compare numbers

5 Use only one of each of these digit cards to:



a Make four different 4 digit numbers.

Answers will vary.

b Make the second largest four digit number possible.  
You can only use each digit card once.

9 874

c Write a number between 4 000 and 7 000.  
You can only use each digit card once.

Answers will vary.

d Make a list of odd 3 digit numbers.

Answers will vary.

6 Tia's lucky number can be made from the digits above. Use these clues to work out what it could be:

- It has 2 digits.
- It is an even number.
- It is greater than 55 but less than 60.

Tia's lucky number is:

58

7 Pick out Roger's lucky number from the clues. It is one of the numbers in the box.

- It is not less than 5 000.
- It does not have 6 tens.
- The digit in the units column is smaller than 5.
- It is an even number.
- It is less than 9 000.

Roger's lucky number is:

7 234

6 578      8 975  
8 765      9 234  
4 567      7 234  
7 923      9 346





Getting ready



This is a game for 2 players. Each player will need the game board and a copy of the digit cards below to cut out, as well as a calculator.



What to do



Combine both players' digit cards, shuffle and lay face down in the centre. Each player draws 6 cards, and without looking at the digit cards, makes two 3 digit numbers laying cards down from left to right.

If the numbers are in the correct position (the number on the left is actually greater than the number on the right), the player writes down the difference as their score.

The winner is the player with the highest score at the end of the game.

			>			
--	--	--	---	--	--	--

Player 1	Player 2

1	2	3	4	5
6	7	8	9	1
2	3	4	5	6



This is a game for 2 players. You need a copy of the digit cards from the previous page, a pencil, paper and a calculator.



Each player begins with 10 000 points.

Player 1 picks four cards from the deck and makes a 4 digit number and **adds** this number to 10 000.

Player 2 does the same.

Player 1 picks four cards from the deck and makes a 4 digit number and **subtracts** this number from their score.

Player 2 does the same.

Continue adding and subtracting 4 digit numbers made from the digit cards until one player has a score that is greater than 50 000.

Player 1	Player 2

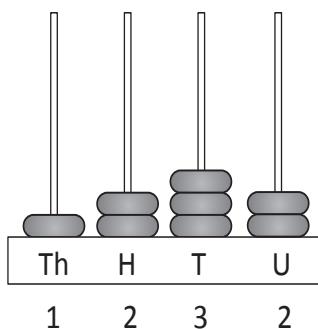
Discover when it is a good idea to make the largest possible 4 digit number you can and when it is better to make the smallest 4 digit number ...



DISCOVER

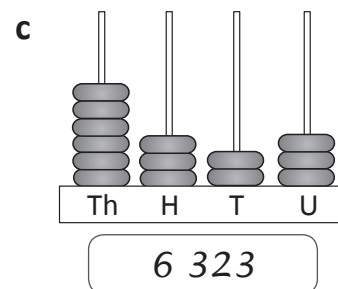
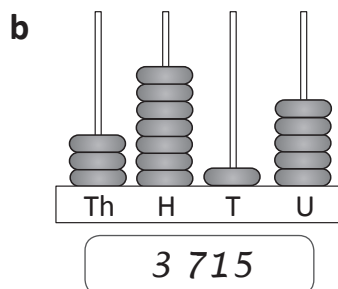
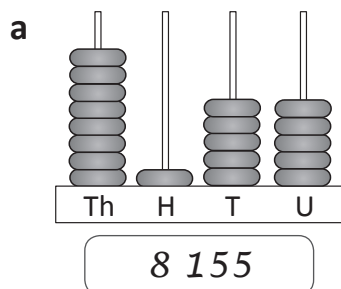
# Place value of whole numbers – place value to 4 digits

We can show the value of a 4 digit number on an abacus and also with base ten blocks.

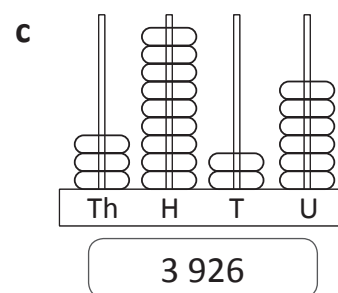
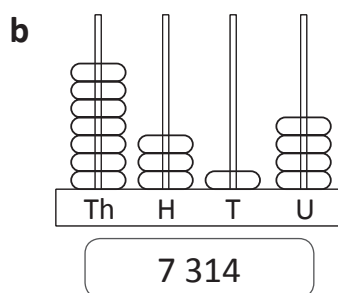
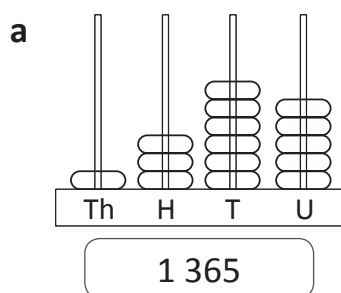


1 is worth 1 000 or one thousand.  
2 is worth 200 or two hundreds.  
3 is worth 30 or three tens.  
2 is worth 2 or two units.

## 1 Write the number shown on each abacus:



## 2 Draw the beads to show the numbers:



## 3 Circle the digit that matches the place value:

a tens: 2 3 3 0

b units: 4 3 2 2

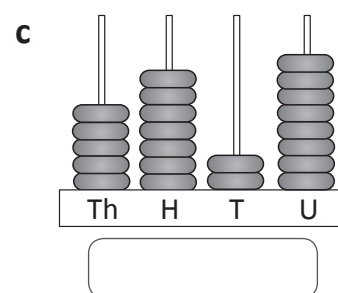
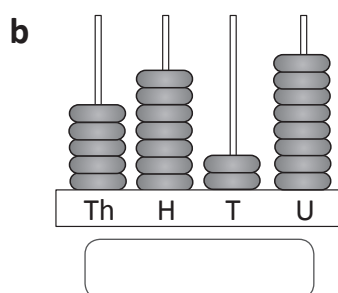
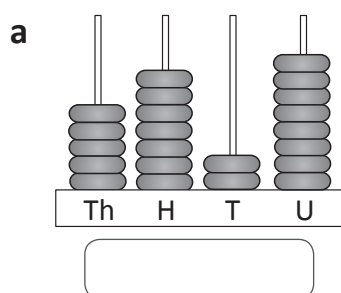
c hundreds: 9 2 1 8

d units: 5 6 6 1

e tens: 8 7 5 4

f thousands: 6 8 4 5

## 4 Add a bead to each abacus anywhere you like and write the new number:



Answers will vary.

# Place value of whole numbers – place value to 4 digits

5 In the table below, write as many 4 digit numbers as you can where the digit in the hundreds column is greater than the digit in the thousands column and the digit in the units column is smaller than the digit in the tens column:

Thousands	Hundreds	Tens	Units
	<i>Answers will vary.</i>		

6 Record the steps you follow to wipe out each digit and turn it into a zero:

8 439

- a Wipe out the 3  $8\ 439 - 30 = 8\ 409$
- b Wipe out the 9  $8\ 409 - 9 = 8\ 400$
- c Wipe out the 8  $8\ 400 - 8\ 000 = 400$
- d Wipe out the 4  $400 - 400 = 0$

7 Now play this game with a partner:

First choose a 4 digit number and write it here:

*Answers will vary.*

Enter this number in your calculator and then take turns subtracting any digit 1 to 9 from this number. This time you must avoid wiping out any digits (changing any to zero). If you do wipe out a digit on your turn, you are out.

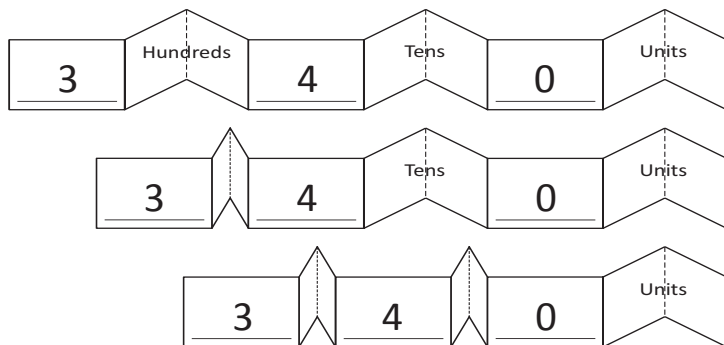
*See if you and your partner can get as low as a 3 digit number without either player getting out.*

To win this game you need to keep your focus on the units column!



# Place value of whole numbers – expanded notation

Numeral expanders show how a number can be expressed in different ways. Look at this example:



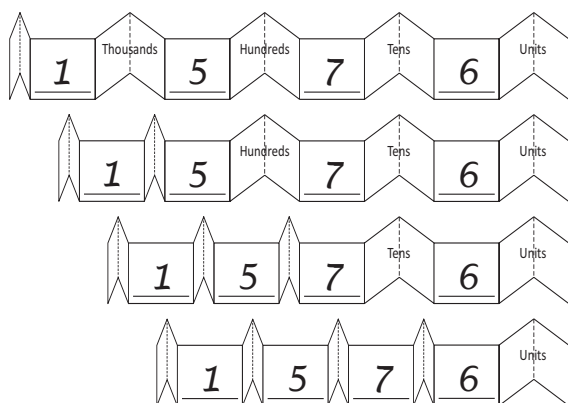
By folding the numeral expander it shows that 340 is made up of 34 tens or 340 units. This makes sense because:

$$34 \times 10 = 340 \text{ and}$$

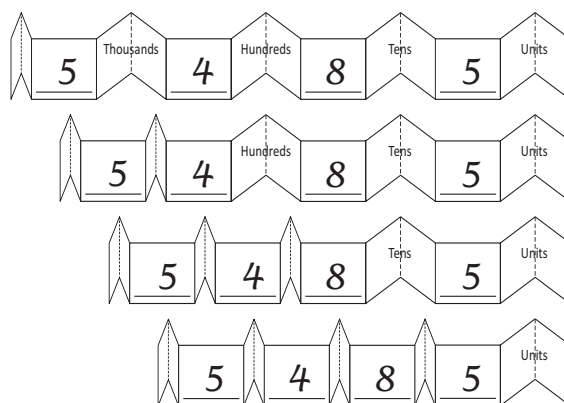
$$340 \times 1 = 340$$

## 1 Write the number shown on each numeral expander:

a 1 576



b 5 485



## 2 Complete each row of the table like the first row:

Numeral	Expanded notation in numbers	Expanded notation in words
4 672	$4\,000 + 600 + 70 + 2$	46 hundreds, 7 tens and 2 units
5 239	$5\,000 + 200 + 30 + 9$	52 hundreds, 3 tens and 9 units
6 142	$6\,000 + 100 + 40 + 2$	61 hundreds, 4 tens and 2 units
3 180	$3\,000 + 100 + 80$	31 hundreds and <u>8</u> tens
3 506	$3\,000 + 500 + 6$	35 hundreds and 6 units
8 258	$8\,000 + 200 + 50 + 8$	82 hundreds, 5 tens and 8 units

83 could also be described as 83 units and 540 could be called 54 tens.



# Place value of whole numbers – expanded notation

3 Rename the following numbers in hundreds:

a 4 100 41 hundreds

b 9 800 98 hundreds

c 6 700 67 hundreds

d 4 500 45 hundreds

4 Rename the following numbers in tens:

a 5 560 556 tens

b 8 880 888 tens

c 4 570 457 tens

d 8 970 897 tens

5 Write the following amounts as numerals from the box:

a 32 hundreds, 9 tens and 2 units

3 292

b 4 thousands, 6 hundreds, 1 ten and 2 units

4 612

c 8 thousands, 67 tens and 2 units

8 672

d 41 hundreds and 7 units

4 107

4 107

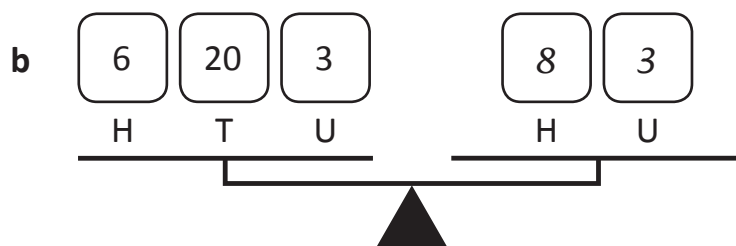
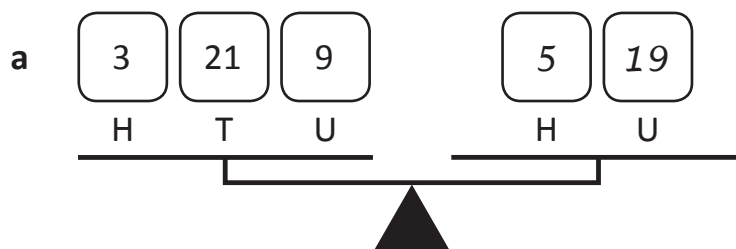
8 672

4 612

3 292

6 Balance the scales by writing the digits that make both sides the same:

Renaming numbers is sometimes called regrouping. The number has the same value though.



# Place value of whole numbers – working with place value

Zero plays an important role in numbers. It tells us that the value of the column is nothing and holds the place of other numbers.

I have \$6 055.  
Without the zero,  
I have only \$655!



## 1 Write these numbers:

- a Four thousands, six hundreds, zero tens and 1 unit.
- b Two thousands, zero hundreds, zero tens and zero units.
- c Six thousands, three hundreds, 1 ten and zero units.
- d Two thousands, zero hundreds, 6 tens and zero units.
- e Ten thousands, nine hundreds, zero tens and zero units.

4 601

2 000

6 310

2 060

10 900

## 2 A zero has been added to each number in different places. Match them to a number in the box and write this number in figure. The first one has been done for you.

a	82	Eight thousand and ninety two	8 092
b	570	Two hundred and seventy	270
c	892	Eight hundred and two	802
d	27	Six thousand, seven hundred and seven	6 707
e	677	Five thousand and seventy	5 070

## 3 Record the steps you followed to use a calculator to change:

- a 567 to 507 by taking away one number.
- b 2 093 to 2 100 by adding one number.
- c 760 to 60 by taking away one number.
- d 997 into a 4 digit number.

– 60

+ 7

– 700

+ 3  
(or more)

# Place value of whole numbers – working with place value

4 Use these digits to make the following 4 digit numbers:

8

7

1

0

a A number with 7 in the hundreds place.

8 710

*Answers  
may vary.*

b Two numbers with 0 in the units place.

8 710

7 810

c One number that has 71 tens.

8 710

d A number that has 87 tens.

1 870

e A number that has zero as a place holder.

8 017

*Sample answers  
8107 or 8170*

5 Help these kids remember their special numbers:

a Charlie needs a password to access his computer. The password includes the digits 5 671. It is the smallest odd number.

What is the password?

1

5

6

7

b Bec needs to withdraw money from the bank but she can't remember her PIN. The password includes the digits 3 398. It is the largest even number.

What is her PIN?

9

3

3

8

c The alarm is ringing in Frankie's house and she needs to remember the code to switch it off. She knows the numbers include 5 927 and that it begins with 9. It is the second largest number.

What is the alarm code?

9

7

2

5

d Max recently changed the combination to the lock on his games cupboard. The combination includes the digits 6 119. It is the second smallest number.

What is the combination  
to the lock?

1

1

9

6





Getting ready

This is a game for 2 players. You will need a copy of this page and a set of 4 dice.



copy



What to do

Each player takes turns rolling the dice and writing one digit in each box where they will fit. You might roll 2 dice, 3 dice or 4 dice, depending on the squares.

**Start**

For example, if you roll a 6 and a 7, you can write the number 67 or 76 next to where it says start. Then, when you roll all 4 dice to create a 4 digit number, you need to get one of the digits that you rolled previously so that the numbers connect like a crossword. The winner is the player who fills all the places on their page first.



This is a game for 3 players. You will need a copy of this page and the cards (below) cut out.



1 person is the caller and the other 2 are the players.

The caller turns over a digit card and announces the number. Each player finds the same digit card and places it in one rectangle in the place value table. Repeat this until each player (including the caller) has a 4 digit number. The caller then reads out their number.

The player who gets a higher number than the caller scores 5 points. If a player has the same number as the caller, they score 3 points. If a player has a lower number than the caller, they score 1 point. If the caller's number is higher than both the players, they score 10 points.



Swap roles. Keep playing until each person has had a turn of being the caller. Add up points at the end to find the overall winner.

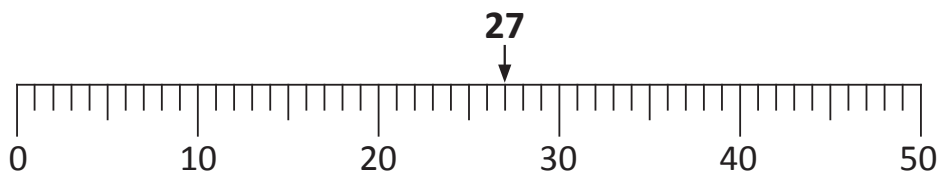
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1	2	3	4	5
6	7	8	9	

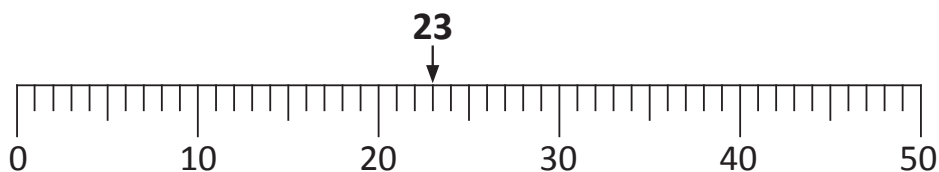
# Round and estimate – rounding to 10, 100 and 1 000

Rounding makes big numbers easier to work with. Look at these examples of rounding to the nearest 10.

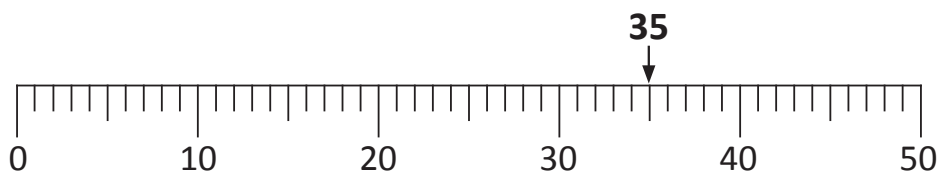
We round up if the number is over the halfway mark: 27 rounds up to 30.



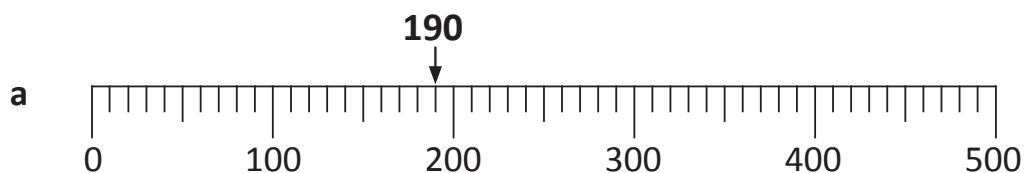
We round down if the number is under the halfway mark: 23 rounds down to 20.



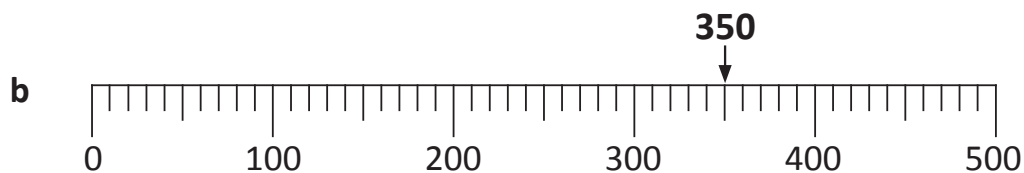
We round up if the number is exactly halfway:



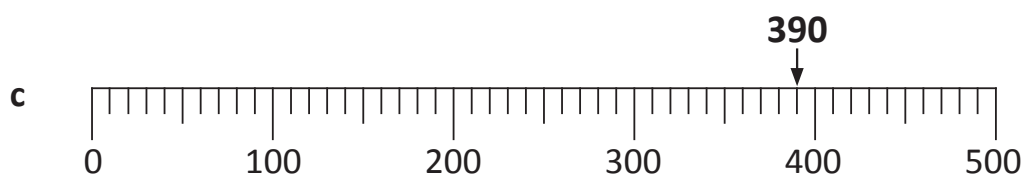
## 1 Round these numbers to the nearest 100:



200



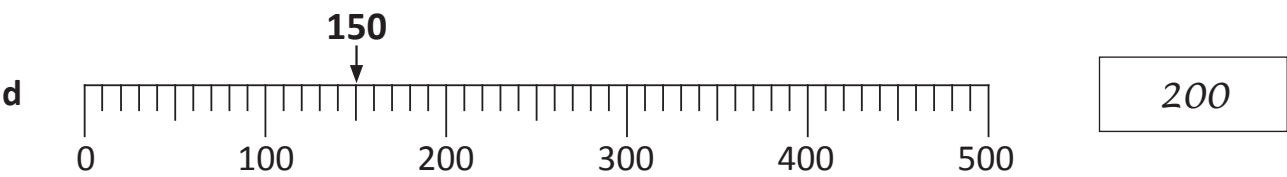
400



400

# Round and estimate – rounding to 10, 100 and 1 000

1 Round these numbers to the nearest 100 (continued):



2 Round these according to the table directions. The first one has been done for you.

Number	Nearest 10	Nearest 100	Nearest 1 000
567	570	600	1 000
673	670	700	1 000
287	290	300	0
527	530	500	1 000
970	970	1 000	1 000

3 Find the number by rounding the numbers:

The number of teeth that a shark has in its lifetime

$\frac{F}{70}$	$\frac{O}{80}$	$\frac{R}{100}$	$\frac{T}{7\,000}$	$\frac{Y}{300}$			
$\frac{T}{7\,000}$	$\frac{H}{20}$	$\frac{O}{80}$	$\frac{U}{1\,000}$	$\frac{S}{400}$	$\frac{A}{500}$	$\frac{N}{200}$	$\frac{D}{40}$

U 999 rounded to the nearest 1 000  
S 356 rounded to the nearest 100  
A 455 rounded to the nearest 100  
N 176 rounded to the nearest 100  
D 37 rounded to the nearest 10

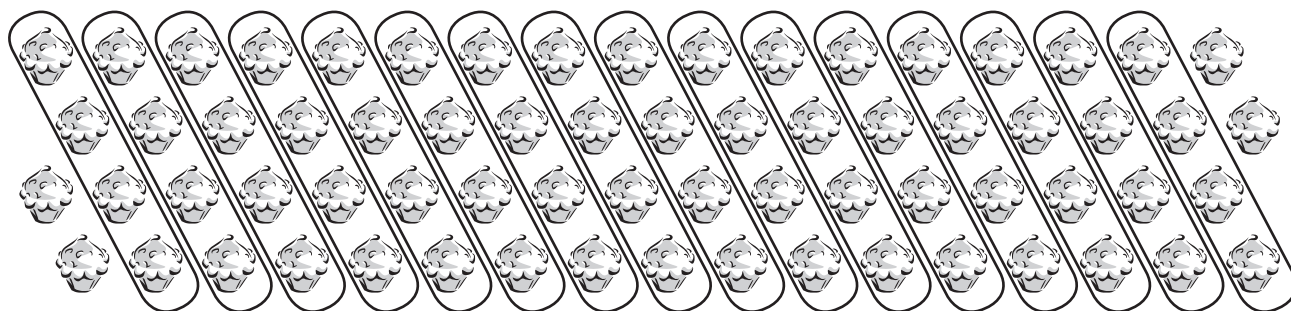
R 99 rounded to the nearest 100  
T 6 892 rounded to the nearest 1 000  
Y 265 rounded to the nearest 100  
H 19 rounded to the nearest 10  
O 84 rounded to the nearest 10  
F 68 rounded to the nearest 10

# Round and estimate – estimating

Estimation is a very useful skill. It is used every day by all sorts of people.

Estimation is not just guessing, it is a way of doing a sum in your head. A good estimate is a reasonable answer, not just a wild guess.

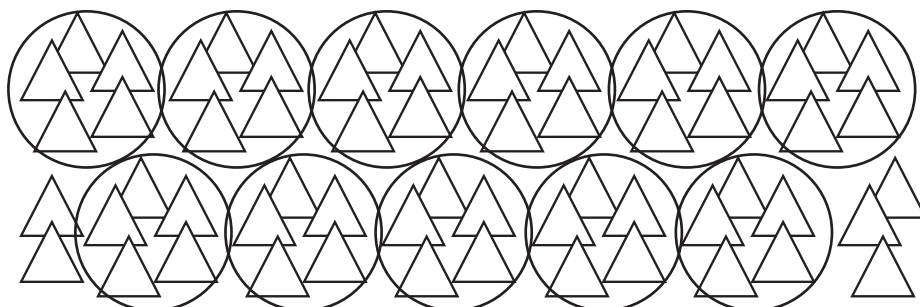
- 1 Estimate the number of cakes below. Start by looking at a sample – the number in one group, then estimate. Try not to count.



My estimate is close to

These objects are not arranged neatly in rows and columns so I need to find a sample a different way. I could divide this picture in quarters.

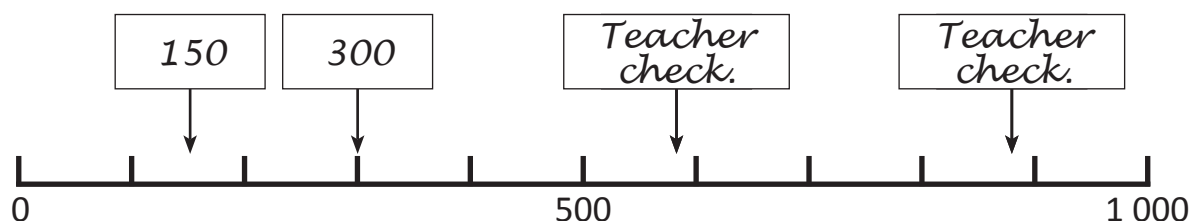
- 2 Estimate how many triangles are in this picture:



My estimate is close to



- 3 Estimate the numbers that could be located at the marked points.



## Round and estimate – estimating

- 4 Estimate how many holes you can make using a hole punch. Fold a piece of A4 paper in half and in half again. Punch some holes a few times. Unfold the paper. Estimate the number of holes.

a Write this number here.

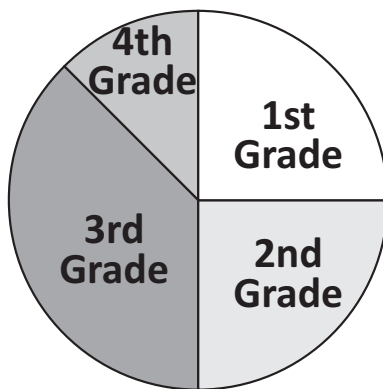
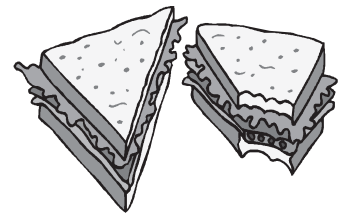
*Answers  
will vary.*

b How did you make this estimate?

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- 5 Try these estimation problems:

- a This pie chart shows the approximate number of children who get lunch orders every day. If there are 20 children in 1st Grade, estimate the following:



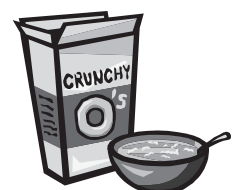
Number of children in 4th Grade:

Number of children in 3rd Grade:

- b Jake wanted to find out how many sultanas there were in a box of cereal. Counting every sultana would take too long. Instead, he scooped a cupful of cereal out into a bowl and counted how many sultanas were in the cup. What did he do next?

*Work out how many cupfuls in a box.*

*Multiply the number of sultanas in a cupful  
by the number of cupfuls.*



## Round and estimate – rounding to estimate

Rounding is a very useful skill for doing mental calculations.

Look at this example:

Lily went to the shops to buy her friend a birthday present. She had saved up \$10 of her pocket money. She picked out wrapping paper for \$1.85 and a card for \$1.10. Lily saw 2 things that her friend would like. One was a book for \$7.90. The other thing was a pencil set for \$6.15. She could not decide which one to buy – she did not have enough for both presents. Which present do you think Lily bought, as well as the wrapping paper and card?

Luckily, Lily used her rounding skills as the shop assistant was getting very impatient. This is what she did:

To find the total of the wrapping paper and card:

\$1.85 rounds up to \$2.

\$1.10 rounds down to \$1. Total is \$3.

Option 1: Book for \$7.90 rounds up to \$8. \$8 plus \$3 is \$11.

Option 2: Pencil set for \$6.15 rounds down to \$6. \$6 plus \$3 is \$9.

Lily chose to buy her friend the pencil set.

### 1 Round these amounts to the nearest dollar :

a \$2.10 =

b \$5.90 =

c \$8.95 =

### 2 Do you have enough money to buy? Circle the correct answer:



choc cream



jelly beans



choc mints



jubes

2 scoops of jelly beans and 1 scoop of choc creams?

Yes / ☒ No

1 scoop of jubes and 1 scoop of choc mints?

☒ Yes / No

3 scoops of jelly beans and 1 scoop of choc mints?

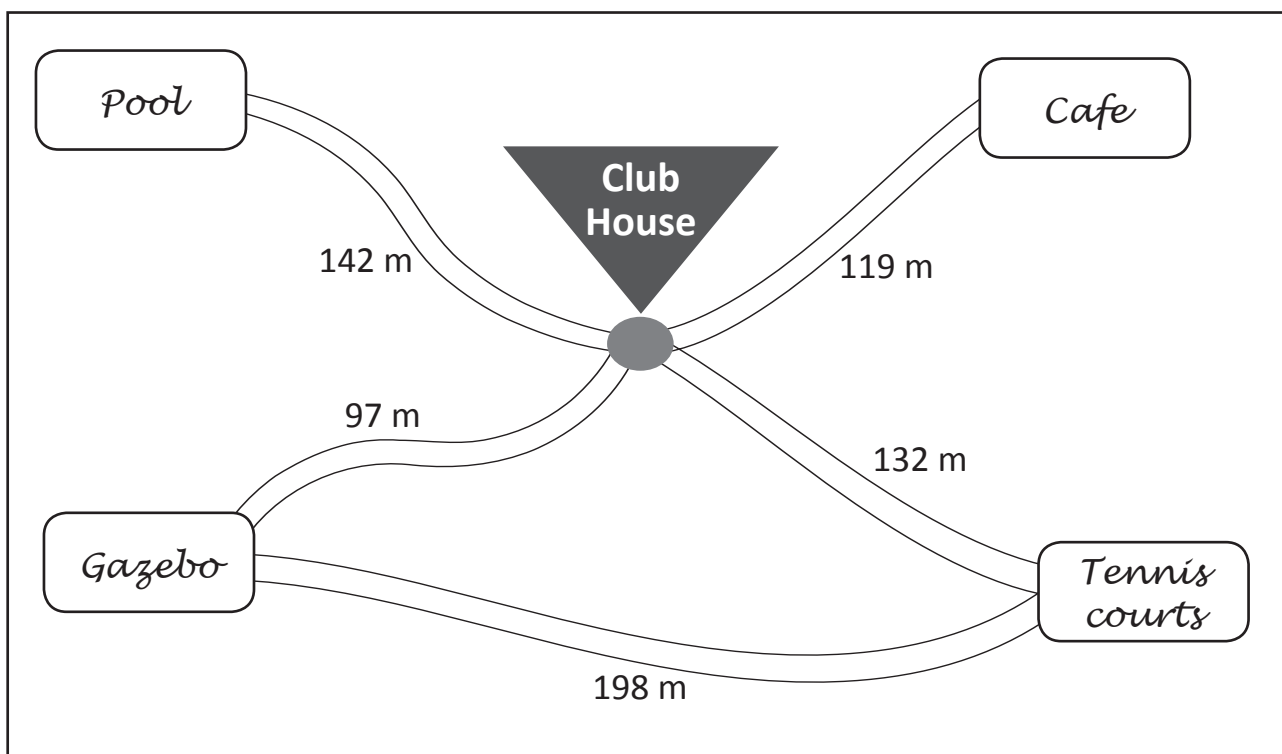
Yes / ☒ No

# Round and estimate – rounding to estimate

3 Round each number and add. Shade the most reasonable answer for each sum:

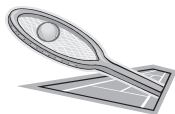
a	$112 + 31 =$	150	113	99	140	120
b	$267 + 72 =$	320	340	330	310	300
c	$123 + 49 =$	170	180	190	270	280
d	$262 + 519 =$	700	160	690	790	780

4 Here is a map of a club house. See if you can label the places correctly. Use the clues below. The places are: cafe, gazebo, tennis courts and pool.



Use these clues in order:

- Rounded to the nearest 10, the cafe is 120 metres away from the club house.



- Rounded to the nearest 10, the pool is 140 metres away from the club house.



- Rounded to the nearest hundred, the distance from the club house to the gazebo is 100 metres. This distance is an odd number.





Getting ready

This is a game for 2 players. You and your partner will need a copy of this page and 3 dice. Also you will each need a calculator to keep score and a marker.

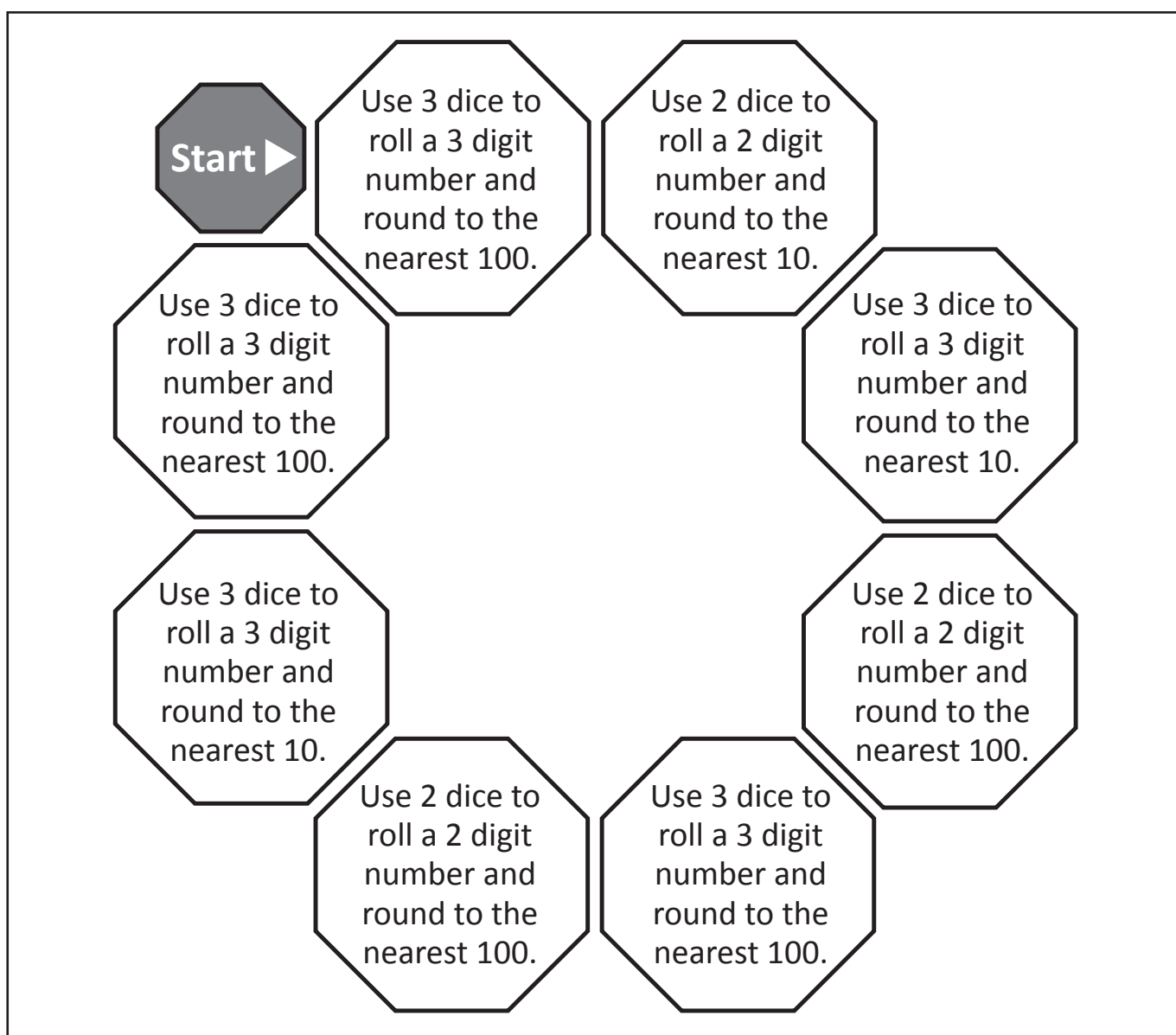


copy



What to do

Decide who will go first. Roll a die and move that number to the next octagon. Follow the directions and record your number. Take turns and keep track of your score on your calculator by adding the number you make on each turn. The winner is the first one to reach 1 000.



What to do next

Play again. This time, make it the best out of three.



This is a game for 2 players. You will need: a coin, 3 dice, counters in 2 different colours, scrap paper and this page.



- 1 Roll 3 dice and write down the largest number you can.
- 2 Toss a coin. If it lands on heads, round to the nearest 10.  
If it lands on tails, round to the nearest 100.
- 3 Place your counter on the number, if you see it on the grid.

The winner is the person with the most counters on the grid after 10 turns each.

200	700	620	410	700	630	650	220
100	670	440	500	600	200	640	610
560	520	300	640	250	510	540	160
630	320	240	700	530	200	110	650
250	550	660	650	310	640	430	640
660	210	670	640	540	210	600	220
500	400	640	420	630	670	550	600
300	540	530	300	400	360	520	500
620	520	700	650	620	660	550	330

**1 Write each number in words:**

a 6 209 \_\_\_\_\_

b 1 467 \_\_\_\_\_

c 8 026 \_\_\_\_\_

d 9 872 \_\_\_\_\_

**2 Order this list of numbers from smallest to largest:**

9 382

9 832

8 126

7 277

7 727

\_\_\_\_\_

**3 Order this list of numbers from largest to smallest:**

6 987

6 889

8 765

7 987

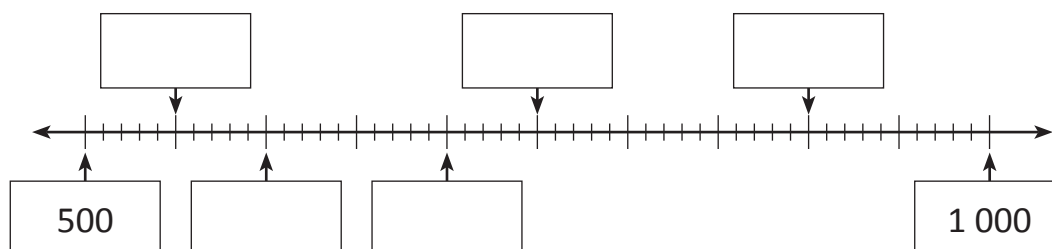
9 098

\_\_\_\_\_

**4 Use the correct < or > symbol to connect these numbers:**

a 246  419      b 954  899      c 8 964  1 746      d 6 876  8 765

**5 Look carefully at this number line and write the missing numbers:**



Skills	Not yet	Kind of	Got it
• Reads, writes and represents numbers up to four digits			
• Orders whole numbers up to four digits			
• Correctly uses greater than and less than symbols			

**1 Write each number in words:**

- a 6 209 six thousand, two hundred and nine
- b 1 467 one thousand, four hundred and sixty seven
- c 8 026 eight thousand and twenty six
- d 9 872 nine thousand, eight hundred and seventy two

**2 Order this list of numbers from smallest to largest:**

9 382      9 832      8 126      7 277      7 727

7 277      7 727      8 126      9 382      9 832

**3 Order this list of numbers from largest to smallest:**

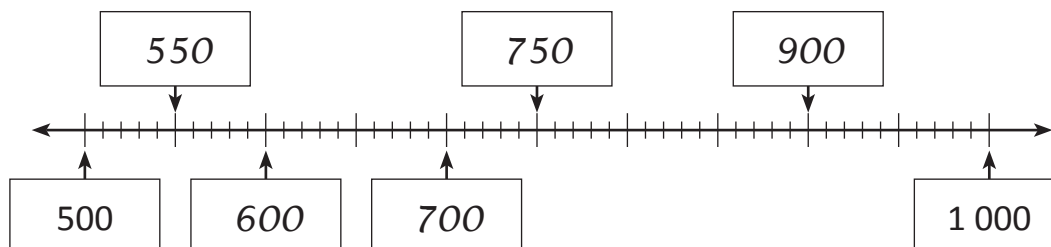
6 987      6 889      8 765      7 987      9 098

9 098      8 765      7 987      6 987      6 889

**4 Use the correct < or > symbol to connect these numbers:**

- a 246  419      b 954  899      c 8 964  1 746      d 6 876  8 765

**5 Look carefully at this number line and write the missing numbers:**



Skills	Not yet	Kind of	Got it
• Reads, writes and represents numbers up to four digits			
• Orders whole numbers up to four digits			
• Correctly uses greater than and less than symbols			

# Place value of whole numbers

Name \_\_\_\_\_

**1 Write the place value of the digit that is underlined:**

a 2 369 \_\_\_\_\_ b 1 028 \_\_\_\_\_ c 9 826 \_\_\_\_\_

d 9 275 \_\_\_\_\_ e 9 384 \_\_\_\_\_ f 2 679 \_\_\_\_\_

**2 Complete this table to show place value:**

Numeral	Expanded notation in numbers	Expanded notation in words
4 672	4 000 + 600 + 70 + 2	46 hundreds, 7 tens and 2 units
	7 000 + 400 + 80 + 3	
		65 hundreds, 1 ten and 5 units
		46 hundreds and 14 units

**3 Use these digits to make the following 4 digit numbers:**

7 9 2 0

a A number with 7 in the hundreds place.

b Two numbers with 0 in the units place.



c Two numbers that have 72 tens.



d A number that has 29 tens.

e A number that has zero as a place holder.

Skills	Not yet	Kind of	Got it
• Identifies the place value of digits in a four digit number			
• Uses expanded notation to record three and four digit numbers			

# Place value of whole numbers

Name \_\_\_\_\_

1 Write the value of the digit that is underlined:

a 2 369 \_\_\_\_\_ 60

b 1 028 \_\_\_\_\_ 1 000

c 9 826 \_\_\_\_\_ 800

d 9 275 \_\_\_\_\_ 9 000

e 9 384 \_\_\_\_\_ 300

f 2 679 \_\_\_\_\_ 9

2 Complete this table to show place value:

Numeral	Expanded notation in numbers	Expanded notation in words
4 672	4 000 + 600 + 70 + 2	46 hundreds, 7 tens and 2 units
7 483	7 000 + 400 + 80 + 3	74 hundreds, 8 tens and 3 units
6 515	6 000 + 500 + 10 + 5	65 hundreds, 1 ten and 5 units
4 614	4 000 + 600 + 10 + 4	46 hundreds and 14 units

3 Use these digits to make the following 4 digit numbers:

7 9 2 0

a A number with 7 in the hundreds place.

9 720

Answers will vary.

b Two numbers with 0 in the units place.

7 920

9 720

c Two numbers that have 72 tens.

9 720

72

d A number that has 29 tens.

7 290

e A number that has zero as a place holder.

7 092

or 7 902,  
or 7 920

Skills	Not yet	Kind of	Got it
• Identifies the place value of digits in a four digit number			
• Uses expanded notation to record three and four digit numbers			

- 1 Complete this table to show how these numbers round. The first one has been done for you.

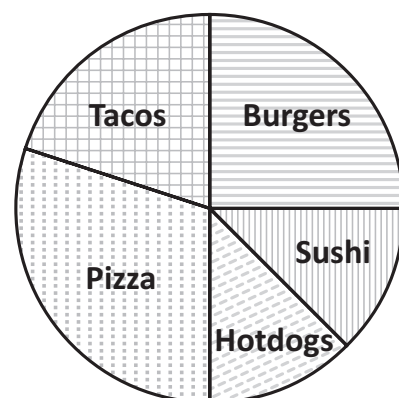
Number	Nearest 10	Nearest 100	Nearest 1 000
673	670	700	1 000
1 872			
982			
198			
789			

- 2 Round each number and add. Shade the most reasonable answer for each sum:

a	$114 + 38 =$	155	150	140	90	120
b	$317 + 65 =$	360	350	390	370	380
c	$189 + 156 =$	310	240	210	340	330
d	$1\,987 + 320 =$	2 100	1 200	1 300	2 200	2 300

- 3 This pie chart shows the favourite foods of a group of 64 people. Estimate how many people chose pizza.

- a Number of people who chose pizza:
- b Explain how you made your estimate.



Skills	Not yet	Kind of	Got it
• Rounds numbers to the nearest ten and hundred			
• Estimates the number of items by grouping			

1 Complete this table to show how these numbers round. The first one has been done for you.

Number	Nearest 10	Nearest 100	Nearest 1 000
673	670	700	1 000
1 872	1 870	1 900	2 000
982	980	1 000	1 000
198	200	200	0
789	790	800	1 000

2 Round each number and add. Shade the most reasonable answer for each sum:

a

114 + 38 =

155

150

140

90

120

b

317 + 65 =

360

350

390

370

380

c

189 + 156 =

310

240

210

340

330

d

1 987 + 320 =

2 100

1 200

1 300

2 200

2 300

3 This pie chart shows the favourite foods of a group of 64 people. Estimate how many people chose pizza.

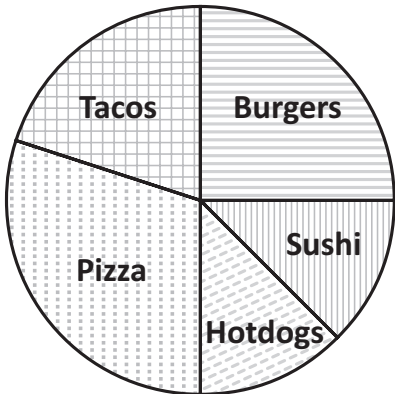
- a

Number of people who chose pizza:

About 18
- b

Explain how you made your estimate.

Answers will vary.



Skills	Not yet	Kind of	Got it
• Rounds numbers to the nearest ten and hundred			
• Estimates the number of items by grouping			



# Series E – Reading and Understanding Whole Numbers

Region	Topic 1 Looking at whole numbers	Topic 2 Place value of whole numbers	Topic 3 Round and estimate
NSW	<p><b>NS2.1</b> – Counts, orders, reads and records numbers up to four digits</p> <ul style="list-style-type: none"> <li>representing numbers up to four digits using numerals, words, objects and digital displays</li> <li>identifying the number before and after a given two, three or four digit number</li> <li>applying an understanding of place value and the role of zero to read, write and order numbers up to four digits</li> <li>ordering a set of four digit numbers in ascending or descending orders</li> <li>using the symbols for ‘is less than’ (&lt;) and ‘is greater than’ (&gt;) to show the relationship between two numbers</li> <li>counting forwards or backwards by tens or hundreds on and off the decade</li> </ul>	<p><b>NS2.1</b> – Counts, orders, reads and records numbers up to four digits</p> <ul style="list-style-type: none"> <li>representing numbers up to four digits using numerals, words, objects and digital displays</li> <li>applying an understanding of place value and the role of zero to read, write and order numbers up to four digits</li> <li>stating the place value of digits in two, three or four digit numbers e.g. ‘in the number 3 426, the 3 represents 3 000 or 3 thousands’</li> <li>recording numbers up to four digits using expanded notation e.g. <math>5\,429 = 5\,000 + 400 + 20 + 9</math></li> <li>ordering a set of four digit numbers in ascending or descending orders</li> </ul>	<p><b>NS2.1</b> – Counts, orders, reads and records numbers up to four digits</p> <ul style="list-style-type: none"> <li>representing numbers up to four digits using numerals, words, objects and digital displays</li> <li>applying an understanding of place value and the role of zero to read, write and order numbers up to four digits</li> <li>rounding numbers to the nearest ten, hundred or thousand when estimating</li> </ul>
VIC	<p><b>Number VELs – Level 3</b></p> <ul style="list-style-type: none"> <li>use place value (as the idea that ‘ten of these is one of those’) to determine the size and order of whole numbers to tens of thousands, and decimals to hundredths</li> </ul>	<p><b>Number VELs – Level 3</b></p> <ul style="list-style-type: none"> <li>use place value (as the idea that ‘ten of these is one of those’) to determine the size and order of whole numbers to tens of thousands, and decimals to hundredths</li> </ul>	<p><b>Number VELs – Level 3</b></p> <ul style="list-style-type: none"> <li>round numbers up and down to the nearest unit, ten, hundred, or thousand</li> <li>estimate the results of computations and recognise whether these are likely to be over-estimates or under-estimates</li> </ul>

# Series E – Reading and Understanding Whole Numbers

Region	Topic 1 Looking at whole numbers	Topic 2 Place value of whole numbers	Topic 3 Round and estimate
QLD	<b>Level 3 N 3.1</b> – Students compare, order and represent whole numbers to 9 999		
	<ul style="list-style-type: none"> <li>whole numbers to 9 999</li> <li>place value from thousands to hundredths</li> <li>position and order of numbers                             <ul style="list-style-type: none"> <li>relationships between numbers</li> <li>sensible adjustments of numbers</li> </ul> </li> <li>greater than (&gt;), equal to (=), less than (&lt;)</li> </ul>	<ul style="list-style-type: none"> <li>whole numbers to 9 999</li> <li>different representations of numbers</li> <li>place value from thousands to hundredths</li> </ul>	<ul style="list-style-type: none"> <li>whole numbers to 9 999</li> <li>position and order of numbers                             <ul style="list-style-type: none"> <li>relationships between numbers</li> <li>sensible adjustments of numbers</li> </ul> </li> </ul>
SA	<b>2.6</b> – Represents and compares rational numbers in a variety of ways, describing relationships among them <ul style="list-style-type: none"> <li>uses manipulative materials to extend the place values system to include tens, hundreds and thousands</li> <li>deconstructs numbers into smaller parts and recombines them in different ways, using patterns, rounding to groups of 10 and 100, and place value relationships</li> <li>uses physical and visual models such as arrays to represent and generalise patterns within and between numbers</li> </ul>		
WA	<b>N 6a.3</b> – Understand whole numbers <ul style="list-style-type: none"> <li>reads, writes, says, counts with and compares whole numbers into the thousands, money and familiar measurements</li> </ul>		
NT	<b>N 2.1 Numbers and number systems</b> <ul style="list-style-type: none"> <li>estimate, compare, order, read and represent numbers up to five digits</li> <li>find out how many 10s, 100s and 1 000s are in a whole number, e.g. 142 has 14 tens</li> <li>identify the number before and after a given number (to five digit numbers)</li> </ul>	<b>N 2.1 Numbers and number systems</b> <ul style="list-style-type: none"> <li>estimate, compare, order, read and represent numbers up to five digits</li> <li>find out how many 10s, 100s and 1 000s are in a whole number, e.g. 142 has 14 tens</li> <li>identify the number before and after a given number (to five digit numbers)</li> </ul>	<b>N 2.1 Numbers and number systems</b> <ul style="list-style-type: none"> <li>estimate, compare, order, read and represent numbers up to five digits</li> <li>round to the nearest 10, 100 and 1 000 in estimation</li> </ul> <b>N 2.2 Calculating</b> <ul style="list-style-type: none"> <li>estimate both sums and products by rounding to a single digit or multiples of ten</li> </ul>
ACT	<b>16.LC.1</b> – whole numbers to at least thousands	<b>16.LC.2</b> – the concept of place value for comparing and ordering numbers (e.g. place numbers on number lines)	<b>16.LC.8</b> – computation using mental, written and electronic methods, and forming estimates to check the reasonableness of answers

# Series E – Reading and Understanding Whole Numbers

Region	Topic 1 Looking at whole numbers	Topic 2 Place value of whole numbers	Topic 3 Round and estimate
TAS	<b>Standards 2–3, Stages 4–8</b> <ul style="list-style-type: none"> <li>• read, represent and order three digit and four digit whole numbers using place-value knowledge</li> <li>• introducing numbers beyond 100 and focusing on their place value</li> <li>• place value (bundling into tens and ones and describing the place value of two digit numbers or using two tens frames to represent 17 as ten and seven more)</li> </ul>	<b>Standards 2–3, Stages 4–8</b> <ul style="list-style-type: none"> <li>• read, represent and order three digit and four digit whole numbers using place-value knowledge</li> <li>• introducing numbers beyond 100 and focusing on their place value</li> <li>• place value (bundling into tens and ones and describing the place value of two digit numbers or using two tens frames to represent 17 as ten and seven more)</li> <li>• representing numbers in different ways e.g. symbols, concrete materials, calculators, number expanders</li> </ul>	<b>Standards 2–3, Stages 4–8</b> <ul style="list-style-type: none"> <li>• read, represent and order three digit and four digit whole numbers using place-value knowledge</li> <li>• round values to nearest 10 upon request</li> </ul>